

SPIE Conference on Astronomical Telescopes and Instrumentation
Section: AS11

Title: IF amplifier stability for the HIFI instrument on FIRST

Abstract:

The HIFI instrument on FIRST is a heterodyne system which has an IF amplifier that will likely exhibit $1/f$ -type gain fluctuations. Although the level of fluctuation is very small, wideband spectral observations require exceptional stability. Several methodologies for measuring $1/f$ fluctuations will be described. I'll review the latest cryogenic measurements of prototype IF amplifiers, compare the results with previous $1/f$ measurements of HEMT amplifiers, and discuss the implications for HIFI.